国際共同先端研究センター(III.研究活動)

5) 明里宏文 (2012/09/16) ヒト免疫不全ウイルスによる MHC-1 発現制御機構の分子構造学的解析. 第 21 回日本組織適合性学会大会シンポジウム, 東京.
6) 齊藤暁 (2013/01/19) 茨城県立並木中等教育学校 SSH 講座『サイエンス・トーク“エイズウイルスを探れ！”』, 茨城県立並木中等教育学校.

国際共同先端研究センター

＜研究概要＞

A) Comparative Wildlife Biology, Conservation, and the Evolution of Social Systems
Fred Bercovitch
1) A two week trip was taken to Uganda for purposes of supervising a Master's student research project aimed at comparing captive and wild chimpanzees.
2) A one-month trip was taken to Zambia for purposes of conducting research, analyzing data, and writing manuscripts on the behavior and ecology of Thornicroft's giraffe along with my colleague in Zambia.
3) Two trips were taken to the United States. One explored possible avenues of research that would involve collaboration with the San Diego Zoo, UCSD, and UCLA, while the other involved detailed library research at NYU and UCLA for a book that I am writing.

B) Behaviour, Ecology and Conservation of Forest Bats
David Hill
1) Enhanced methodology for surveying bat diversity in forest habitat
Field tests of the Autobat acoustic lure were conducted in southern Thailand (collaboration with Mr Pipat Soisook and Dr Sara Bumrungsri, Prince of Songkla University); Imbak Canyon and Maliau Basin, Sabah and Perlis State Park, Malaysia (collaboration with Dr Shahrul Anuar, Universiti Sains Malaysia). Also in Yakushima and Shimukappu, Hokkaido.
2) Genetic analysis of the social system of Murina ussuriensis
(With JSPS Post-Doctoral Fellow, Dr Jon Flanders) Tissue samples were collected from >80 bats in Yakushima and Hokkaido for DNA analysis to investigate patterns of dispersal and philiopatry. DNA analysis is completed and the paper is currently being written.

C) チンパンジーを対象にした比較認知研究
足立幾磨
チンパンジーを対象に, 社会的認知能力、とくに顔知覚様式・個体情報の視聴覚統合にかかわる比較発達研究をおこなった。また、言語の進化的起源を明らかにするため、感覚間一致について分析をおこなった。コンピューターを用いた認知課題の成績および、各種の視覚刺激提示時の注視行動の分析をおこなった。

D) 動物園のチンパンジーの知性の研究
足立幾磨
名古屋市の東山動物園のチンパンジー１群７個体を対象に、屋外運動場での社会行動を観察記録した。また、隣接する実験ブース「パンラボ」において、コンピュータ課題をもちい彼らの知性を分析した。

E) Parasites as a Selective Force in Primate Social Systems Evolution
Andrew MacIntosh
This research aims to investigate (1) social factors involved in parasite transmission and (2) potential fitness constraints imposed by chronic helminth infection on primate hosts. This research is supported by a JSPS grant-in-aid for young scientists (B) as of April 2012. My paper highlighting the role of social status and grooming networks in nematode parasite transmission was published, laying a foundation for continuation of this work. I also presented this work at the congress of the International Primatological Society in Cancun, Mexico. Concurrently, I began a manipulative field experiment involving parasite removal via anthelmintics from target individuals in the Koshima main troop of Japanese macaques. Preliminary results suggest mixed results concerning the efficacy of the initial medication used, but that even partial parasite removal may have benefits for treated macaques. Additionally, I initiated a project to expand this research from a single-host, multiple-parasite system with Japanese macaques to a multiple-host, multiple-parasite system with communities of Bornean primates and their intestinal parasites.

F) Complexity in Behavioral Organization: a bio-indication of individual quality
Andrew MacIntosh
This research uses advanced analyses of organizational properties in sequences of animal behavior to determine the impacts of individual variation, including experimentally altered physiological conditions (e.g. stress), and environment on deviations from patterns predicted by optimality theory. A JSPS Researcher Exchange grant allowed me to visit France between May and June to conduct analyses using dive sequences collected via bio-logging from two penguin species, which has led to the submission of two papers currently under review as well as a poster I presented at the congress of the International Primatological Society in Cancun, Mexico. This work has also led to the approval of our team's application to the French Polar Institute (IPEV) to continue this work in Antarctica.

G) Cultural transmission of arbitrary conventions in Japanese macaques

Claire Watson

After learning to identify the 50 individuals in two groups housed in large enclosures at RRS, I built two receptacles for this study and collected baseline data on interaction of monkeys with receptacle and plastic tokens. A divider was built to allow me to train a demonstrator individual from each group without the rest of the group observing. I habituated the demonstrators to the divider and have successfully trained the required behavior in one model. Ethical approval was granted for this study.

H) Chimpanzee social interaction and cognition

Chris Martin

I spent two months in Bossou, Guinea making daily observations of a group of chimpanzees in their wild habitat. While in Guinea, I also conducted field experiments with humans as part of an ongoing behavioral economics research project to compare strategic reasoning abilities across great ape species. At Primate Research Institute, I completed a social coordination experiment consisting of a shared numerical sequencing task for chimpanzees. I wrote submitted a paper on a separate game theory experiment with chimpanzees (currently under review). I began a project to examine the enrichment benefits and comprehension skills of chimpanzees engaging in videoconferencing activities with conspecifics.

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白眉プロジェクト

＜研究概要＞

A) 表情コミュニケーションについての実験心理学的研究

佐藤弥, 河内山隆紀, 澤田玲子

表情や視線による対人コミュニケーションにおける情報処理過程を、反応記録・ビデオ録画・筋電図計測などにより検討した。定型発達者および発達障害者を対象とした。

B) 表情コミュニケーションについての神経科学的研究

佐藤弥, 河内山隆紀, 澤田玲子

表情や視線による対人コミュニケーション課題を遂行中の神経活動を、fMRI・深部脳波などを用いて計測した。

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